



# Transportation News

A Resource for Military Transportation Engineers



Volume 16, December 1998

## In This Issue

<i>TS2K Workshop</i> .....	2
<i>Army Airfield Consulting Services</i> .....	2
<i>Recommended Joint Sealant</i> .....	2
<i>Design Review Policy</i> .....	3
<i>TS2K Call for Papers</i> .....	3
<i>USACE Helps Ft. Hunter Liggett</i> .....	3
<i>Meet the TSMCX</i> .....	3
<i>Join the Group</i> .....	4
<i>Fairwell to Railroad Engineer</i> .....	4
<i>PCASE Workshop</i> .....	4
<i>Jointed Rail Versus CWR</i> .....	4
<i>Get the News Early</i> .....	4
<i>The Second Time Around</i> .....	5
<i>AAF Pavement Evaluations</i> .....	5
<i>New Joint Service Specification</i> .....	6
<i>Air Force Publications on Internet</i> ..	6
<i>NCAT Publications</i> .....	6
<i>www.internet.addresses</i> .....	6
<i>Superpave Construction Guidelines</i> ..	6
<i>AMC Adopts Review Policy</i> .....	6
<i>Training Courses</i> .....	7
<i>Calendar of Events</i> .....	7
<i>Conference to Show Testing Facility</i> ..	7
<i>Team Effort for New Rail Line</i> .....	7
<i>Internet Address Correction</i> .....	7
<i>Update Your Mailing List</i> .....	8
<i>TSMCX POCs</i> .....	8

## Air Force Helps Save the Whale

With the help of the Air Force, Keiko, the killer whale, arrived safely at his new home in Vestmannaeyjar (pronounced Westman) Island, Iceland on 10 September 1998. Keiko was born in the Atlantic Ocean near Iceland in 1977. At age 2 he was captured and brought to Saedyrasfnid, an Icelandic aquarium. Keiko was sold to various owners and eventually ended up in Mexico City, Mexico. It was in Mexico City that Keiko made his debut in the Free Willy movie. The movie portrays a killer whale, threatened by unscrupulous amusement park owners but helped to freedom by a young boy. In November 1993, Life magazine published a story revealing that Keiko lived in an inadequate facility where, despite the owner's best efforts, he suffered chronic health problems. An avalanche of inquiries began arriving at Warner Bros., appealing to the moviemaker to take action on Keiko's behalf. The following year the Free Willy Keiko Foundation was formed and received \$4 million in donations. The Foundation's mission was to relocate and rehabilitate Keiko at a new facility, with the hope that Keiko could one day be released back into the wild. In January 1996 Keiko was moved to Newport, Oregon, where he experienced natural seawater for the first time in 14 years. In September 1998 Keiko was declared healthy and thus began his journey home to Iceland.



*Keiko, the killer whale*



*The C-17 Globemaster III at Vestmannaeyjar Island*

The C-17 Globemaster III took Keiko on his 10 hour, 8,630 mile journey home. The C-17 is the only aircraft in the world capable of both flying a large payload like Keiko and landing on short, rough airstrips. The C-17 Globemaster was equipped to fly the 10,000-pound whale in his 35,000-pound transport container and land on the 1325 meter airstrip adjacent to his bay pen. Other aircraft with similar cargo capacity typically require at least twice the landing distance and cannot land on gravel terrain.

In preparation of the arrival of Keiko the airfield had to be evaluated to determine if the pavements could support Keiko and his equipment (estimated gross landing weight of 400K). The Air Force sent a team to Iceland to look at the airfield for pavement readiness, fire protection, emergency medical, etc. SMSgt Dave Adams and Mr. Ken Hevner, Air Mobility Command, performed a structural evaluation of the runway pavement. The pavement team used the PCASE programs: Dynamic Cone Penetrometer (DCP) and the Airfield Pavement Evaluation (APE) for calculating CBRs and number of passes, respectively. The Free Willy Foundation reimbursed all costs incurred.

(Continued on Page 2, Column 1)

---

## Air Force Helps Save the Whale (Cont'd)

The airfield surface consists of a double bituminous surface treatment over the center 30 meters and a single bituminous surface treatment over the outer 7.5 meters. The interior surface is in very good condition. However, the outer 7.5-meter surface has been damaged by snowplows, exposing the base course. Areas of damage were near the runway ends where there was a potential for additional damage from jet blast during take-off or during 180-degree turns. Also, a FOD potential existed that would limit backing of the C-17.



*Air Force evaluates the airfield pavement for Keiko's arrival*

Using the APE computer program, it was determined the airfield strength was adequate for 5 passes of a C-17 at a weight of 400,000 pounds. The primary concern was the potential for pavement damage to the outer 7.5 meters of pavement from 180-degree turns and from jet blast. The local officials were made aware of the concern and stated they would be willing to sign a document stating they were aware of this potential damage and would be willing to assume all responsibility for any pavement damage.

As of 1 November 1998, Keiko was very active and spending a great deal of time under water. He was eating well and seems keenly interested in his environment. For more information on Keiko there is a number of web sites, try a few at <http://www.keiko.org> or <http://keiko.vestmannaeyjar.is> 🐳

## Transportation Systems 2000 (TS2K) Workshop Homepage Now Available

There is a homepage now available for the workshop at <http://www.transportation2000.com> All the latest information about the workshop is available on the homepage. The homepage includes:

- Objective – gives the objective of the workshop.
- Home – gives the date and location of the workshop.
- Mailing List – puts interested parties onto an e-mail list for sending reminders out electronically.
- Call for Papers – includes the notice, dates, and requirements for papers.
- Steering Committee – lists Committee's names, phone, and e-mail addresses.
- Conference Hotel – gives information about the hotel and provides a link to the hotel's homepage.
- Local Information – links to Yahoo that provides information about San Antonio local attractions, daily weather information, etc.
- Exhibitors link will include an application for exhibitors and information about the exhibitors.
- Information – the participant can send questions and comments directly to the workshop coordinator via e-mail.
- Private – secure area for Committee access only.

Still to come to the homepage: On-line registration, Workshop Agenda, and Special Functions.

To keep current on workshop events stay plugged into the TS2K homepage. If you can't access the homepage and need more information about the workshop, contact [Mary Adolf](#), (402) 221-7265.

## Sign up to be on the E-Mail Group

There is a link on the homepage that registers you for an e-mail group. By submitting your name and other vital information, such as e-mail address, puts you in the e-mail group that will be used to send out reminders about the workshop electronically. Fill out the mailing list registration on the homepage or submit your e-mail address to [mary.j.adolf@usace.army.mil](mailto:mary.j.adolf@usace.army.mil) 🐳

---

## Army Airfield Consulting Services

The Transportation Systems Center (TSMCX) is your one door to the Corps for experts in airfield engineering services. The TSMCX has in-house expertise and access to Corps of Engineers Army Airfield Experts throughout the country to answer all your questions and needs. The TSMCX can provide telephonic or on-site airfield consulting services to Corps of Engineers Districts, Installation DPW's or Army Airfield Commanders. The scope of services vary from advanced planning (pre DD Form 1391 studies) to post construction forensic studies. Most telephonic consultations are free, however on site consultations are on a reimbursable basis. Examples of services provided include airfield obstruction mitigation surveys, advanced planning and site selection studies, airfield master plans, construction oversight and trouble shooting and forensic studies. Requests for airfield pavement evaluations (non-destructive testing (NDT), dynamic cone penetrometer (DCP) testing, sampling, etc) will be referred to the Pavement Systems Division at the Waterways Experiment Stations. Requests for design assistance will be forwarded to the local Corps design district. For more information contact [B.J. Skar](#), (402) 221-7262. 🐳

---

## Recommended Joint Sealant for Air Force Hangar Floors

For hangar floors with polyurethane coating systems use Federal Specification, SS-S-200E, "Sealants, Joint, Two-Component, Jet-Blast-Resistant Cold-Applied, for Portland Cement Concrete Pavement", dated 1 December 1992. Neoprene compression seals are not recommended because of compatibility problems with the polyurethane coating. Neoprene compression seals may be used for hangar floors with no reflective polyurethane coating system. 🐳

## Military Construction Design Review Policy

Below is the new review fee schedule for the Transportation Systems Center (TSMCX). As defined in Memorandum, CEMP-ET, 6 Aug 1998, the following require TSMCX review and will be project funded and reimbursed by the design district:

- All airfield and railroad project designs, regardless of funding type.
- All projects, regardless of funding type, where the roadway portion is over \$3,000,000.

### Average Review Fees

Programmed Amount	Basic Review Fee
Less than \$1,000,000	\$3,500
\$1,000,000 to \$2,500,000	\$4,500
\$2,500,000 to \$5,000,000	\$6,000
\$5,000,000 to \$7,500,000	\$7,000
\$7,500,000 to \$10,000,000	\$8,000
\$10,000,000 to \$20,000,000	\$10,000
Over \$20,000,000	Contact TSMCX

**Basic Review Fees** are based on the airfield, road or railroad portion of the project only. For example, for a \$20M hydrant fuel project, which includes \$2M of airfield paving, the basic review fee would be \$4,500.

**Design-Build projects** will require approximately 100% higher review fees depending on the size, scope and complexity of the project. Design-build contractors are usually not familiar with specific DOD requirements, therefore several submittals and reviews are required to verify that design criteria is met.

**Lighting/NAVAIDS.** Airfield projects that include both pavements and lighting/NAVAIDS will require higher review fees depending on the scope of the airfield lighting/NAVAIDS portion of the project. Projects with major rehabilitation or new airfield lighting systems and electronic NAVAIDS will require approximately 75% higher review fees.

**Additional Reviews.** Review fees are based on two reviews, preliminary design and final design. Additional reviews will require approximately 35% higher review fees.

**Conferences/Site Visits.** Additional funding for labor and travel will be required for review conferences and site visits, when requested by the design district or customer.

**Design Budget.** The above fees should be used as a guide for the preparation of a design budget. Actual fees for design reviews should be negotiated between the design district and the TSMCX.

For more information contact [Terry Sherman](#), (402) 221-7260. ✉

## TRANSPORTATION SYSTEMS 2000 CALL FOR PAPERS

Papers and presentations for the Transportation Systems 2000 Workshop are sought on all aspects of the design, construction, evaluation, repair, and maintenance of airfields, military roads and railroads. Authors are invited to submit an abstract of their proposed paper. The workshop will be 29 February - 2 March 2000 in San Antonio, Texas. For topic ideas and submission deadlines check out the Transportation Systems 2000 homepage at <http://www.transportation2000.com> ✉

## USACE Helps Fort Hunter Liggett Build C-17 Assault Strip

The 416<sup>th</sup> Engineering Command is building a C-17 Assault Strip at Fort Hunter Liggett. To help in the design of the strip the Transportation Systems Center provided criteria along with electronic copies of the Army Facilities Component Systems Drawings developed for contingency airfields. The drawings were recently updated to include the C-17 aircraft criteria. The Transportation Systems Center will provide assistance to the 416<sup>th</sup> during the design and construction phases of their project at Fort Hunter Liggett. For more information contact [B.J. Skar](#), (402) 221-7262. ✉

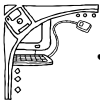
## Meet the TSMCX

*Wondering who we are at the Transportation Systems Center? This is part one of a 9 part series to introduce each member that makes up the Transportation Systems Center.* Our first member is none other than the *Transportation News* editor Mary Adolf (only because no one else would sit long enough for an interview). Ms. Adolf began her Corps career as a draftsman (back before the days of CADD) during summer vacations. She vowed to get her Civil Engineer degree to avoid having to draft other Engineer's work. After receiving her Civil Engineering degree from the University of Nebraska she went to work for the Civil Section of the Omaha District doing road design and grading. After attending a pavement course at the Waterways Experiment Station (WES) in Vicksburg, Mississippi she decided to give the South a try working for the Pavement Systems Division. At WES she went around the country thumping pavements with the 18-kip vibrator for pavement evaluations (the vibrator has since been replaced by the falling and heavy weight deflectometer (FWD/HWD)). After a few years in the south she moved back to Omaha to marry the love of her life and went back to work for the Omaha District in the Foundations and Materials Branch doing airfield pavement design. After a short stint in Environmental Project Management, Ms. Adolf went to work for the Transportation Systems Center in 1991. Ms. Adolf now enjoys managing the PCASE program, teaching regional PCASE workshops, creating the newsletter, reviewing pavement evaluations, and coordinating the Tri-Service Transportation Systems Workshops. What she likes best about working for the TSMCX is the opportunity it provides to meet and help people from around the world and to learn from their experiences. ✉

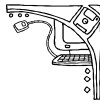


*Mary Adolf, Transportation Systems Center, working on Transportation News newsletter.*





## Join the Group



Not sure when a Pavement-Transportation Computer Assisted Structural Engineering (PCASE) computer program has been updated or a new one has been released? Are you always looking for the latest and the greatest computer program? Do you want to be on the cutting edge of program development? If you answered yes to any of these questions submit your e-mail address to [mary.j.adolf@usace.army.mil](mailto:mary.j.adolf@usace.army.mil) to join the PCASE e-mail group. A notice will be sent to you when programs have been updated or a new program has been released. Other PCASE information may be included as well. This is available to DOD employees only. Get your name in today to get the latest information tomorrow.

## PCASE Workshop

A PCASE regional workshop has been scheduled for 23 & 24 October 1999 at the Honolulu District located at Fort Shafter, Hawaii. The workshop will provide hands-on training for the airfield and roadway design programs (ADP and ROAD), the airfield evaluation program (APE) and the new on-line programs (E-UNSURE, E-DRAIN, E-DOCLOC, E-FACT). The workshop will also introduce the new programs being developed for FY99. If you would like more information about the workshop or would like to schedule a free workshop for your area contact [Mary Adolf](mailto:Mary.Adolf@usace.army.mil), (402) 221-7265 or at the above e-mail address. For more information on PCASE go to the web site at <http://pavement.wes.army.mil/pcase.html>

## Get the News Early

You can get the news early by reading *Transportation News* on-line at <http://w3.nwd-mr.usace.army.mil/tsmcx/tsmcx.html>. The on-line version is available a month before the hard copies are mailed out (publishing time). If you prefer to read the newsletter on-line please send an e-mail message [mary.j.adolf@usace.army.mil](mailto:mary.j.adolf@usace.army.mil). We will notify you via e-mail when a new edition is on-line.

## Farewell to CECER Railroad Engineer

The Transportation Systems Center would like to wish Mr. Don Plotkin of the U.S. Army Corps of Engineers Construction Engineering Research Laboratory (CECER) all the best in his new appointment with the Federal Railroad Administration.

Mr. Plotkin worked for the Corps for 14 years as a principal investigator. While at CECER he developed the Air Force/Army railroad track standards, the Railroad Design and Rehabilitation technical manual, and the Railroad Track Design and Evaluation for Work Planning (TRACK) computer program. He worked on studies for high-speed rail and the Magnetically Levitated (MAGLEV) train. Mr. Plotkin also worked on bridge projects, a maintenance management system for bridges, and developed standardized assessment procedures for coastal navigation structures while at CECER. Previous to his life in the Corps, Mr. Plotkin worked for 7 years at the Illinois Central Gulf Railroad.

Don's favorite mode of transportation is the train. Whenever time and tracks allow, he takes a train to his destinations. Under appropriate supervision he has been known to operate a train or two.

The Transportation Systems Center will greatly miss Don's expertise and enthusiasm for the track world. Good luck Don!

## Jointed Rail versus Continuously Welded Rail (CWR)

The following is an excellent explanation why CWR is normally not appropriate for Army track.

Railway track can either be constructed with bolted joints in between contiguous rails or the joints can be eliminated by welding the rails together. While continuously welded rail (CWR), overall, requires less maintenance than bolted rail track, it is most unforgiving of deferred maintenance. This is because of differences in the way in which welded rail handles thermally induced strain versus bolted rail. In bolted rail track, the joints are customarily laid with a small gap between the rail ends. As the rail temperature increases, these gaps will close with very little increase in the internal stresses in the rail. Welded rail, on the other hand, cannot expand longitudinally, hence increased temperatures result in compressive stresses in the rail and decreased temperatures result in tensile stresses. Since a section of rail is far too slender by itself to resist high compressive stress without buckling, CWR must derive its lateral strength from the strength of its attachments to the cross-ties and the stability of the cross-ties in the ballast. Thus, the strength and adequacy of the rail fastenings and the stability of the ballast section are extremely important in CWR track, far more so than in bolted rail track. Further, sharply curved CWR track is more likely to incur buckling problems. If maintenance is either inadequate or deferred, track buckling is very likely in hot weather. Jointed rail track is much more forgiving of deferred maintenance; and while operations may be restricted, trains will continue to be able to run. Track buckling is virtually unheard of in properly constructed bolted rail track.

Because funding for maintenance is dependent on annual congressional appropriations, CWR is not recommended because it is not tolerant of deferred maintenance. Further, even considering a full-scale mobilization of Army military units, the level of operations expected over the Army system does not warrant the use of continuously welded rails. In addition, the Army system maintenance personnel do not have the expertise or equipment that is required to properly care for welded rail. Therefore careful planning should be used in selecting the type of rail for a project.

Source: Design Analysis for Fort Campbell, Rail Connector Project by Parsons Brinckerhoff

# The Second Time Around

*In the past several years, recycling efforts have become widespread both, for their environmental and economics benefits. U.S. Army Cold Regions Research and Engineering Laboratory (CRREL) has combined these benefits in experimenting with recycled materials as pavement aggregate. This is part one of a 3 part series of studies being performed at CRREL using recycled materials.*

Each year, Americans dispose of approximately 200 million passenger tires and 40 million truck tires. This equates into a total of 4 million tons of discarded tires added to a stockpile of 2 billion tires. Less than 15% of these discarded tires are ever recycled. Stockpiled tires represent a threat to the safety and health of surrounding environs.



*Tire disposal area*

Using ground rubber from discarded tires seems to be a promising method of using the stockpiled tires by replacing natural aggregates in road surfaces. CRREL researchers estimate that "for every five miles paved with a rubber aggregate, a mile of stone, which is a natural resource, is saved." Rubber aggregate is not only a useful way to recycle scrap rubber but, also decreases the amount of chemicals needed to de-ice roads, enhances ice disbonding, decreases the likelihood of hydroplaning and provides improved skid resistance.

CRREL testing focused on samples using larger rubber particles and samples with higher concentrations of rubber, thus producing Chunk Rubber Asphalt Concrete. The concrete has a rough surface from which chunks of rubber protrude. In cold weather conditions, ice freezes around these protruding rubber particles, which are flexible and compress under the pressure of traffic. Consequently, the compression produces cracks and disbonding in the surface ice. This

type of rubber modified asphalt is particularly suited to bridges and overpasses as well as to airfield runways.

The adverse effect of using rubber aggregates is that rolling resistance increases. It's estimated that the rolling resistance of a rubber-aggregate asphalt pavement is 2-3% higher than conventional asphalt surfaces up to 42 miles per hour. Thus, motorists could get less mileage per gallon at lower speeds. More importantly, rolling resistance could contribute to an increase of exhaust fumes released into the atmosphere at the lower speeds.

For more information on chunk rubber asphalt concrete contact Robert Eaton, CRREL, (603) 646-4209, or e-mail at [reaton@crrel.usace.army.mil](mailto:reaton@crrel.usace.army.mil). To learn more about applications for recycled materials look for future issues of *Transportation News*. 📧

## Army Airfield Pavement Evaluation Program

Most of the U.S. Army Airfields (AAF) were built 40 to 50 years ago and designed to support World War II and Korean War aircraft. These pavements were last evaluated in the 1960's and are now required to carry much heavier aircraft such as the C-5, C-141, DC-8, B-747, and the C-17. In May 1982 the Department of the Army initiated a program to evaluate the load-carrying capacity and general condition of pavements at major army airfields.

Guidance for this program is provided in Army Regulation AR 95-2 "Air Traffic Control, Airspace, Airfields, Flight Activities, and Navigational Aids," which requires pavement evaluations to be scheduled on a recurring 5-year cycle for nine critical Category 1 airfields. Structural evaluations and condition surveys are required on all other Category 1 airfields and instrumented heliports/helipads on recurring 8- and 4-year cycles, respectively.

The AAF evaluation program benefits the Army and the warfighter by indicating if the pavements can support the mission. The program also benefits those responsible for the airfield, by recommending the most cost-effective pavement maintenance and upgrades required to support the mission. At Libby AAF, Ft. Huachuca, Arizona, WES was able to determine the cause of failures on a newly

constructed asphalt concrete runway and make recommendations for repair. At Campbell AAF (CAAF), Ft. Campbell, Kentucky, portions of the primary facilities were closed due to pavement failures caused by heavy aircraft deploying for Desert Storm/Desert Shield. The evaluation at CAAF determined the cause of the failure, thereby coming up with recommended temporary repairs that allowed the safe return of the forces. In July of 1993, Missouri River flooding resulted in the pavements at Sherman AAF, Ft. Leavenworth, Kansas to be 8-10 feet under water. After floodwaters receded the pavements were tested weekly until the pavement strength had stabilized. As a result of this investigation, premature failures due to localized weak areas were prevented. In March 1996, WES performed a pavement investigation at Taszar Air Base, Taszar, Hungary in support of Operation Joint Endeavor. Nondestructive testing was conducted, providing allowable loads, suggested repair techniques, and overlay requirements. A report was prepared on site within a week.

U.S. Army Engineers, Waterways Experiment Station (WES) is the agency designated in AR 95-2 and AR 420-72 for conducting AAF evaluations. WES has the mission for developing airfield pavement evaluation criteria for the Army and pioneered the use of Non-Destructive Testing (NDT) methods and equipment for airfield evaluations. The AAF evaluation program enhances WES's pavement research mission by exposing research personnel to real-life, on-the-ground problems and pavement conditions, and allows WES researchers to experiment with new evaluation tools, such as the portable seismic pavement analyzer (PSPA).

AAF evaluation results and reports are maintained at WES, as well as provided to the installation and airfield manager. Results of these investigations substantially increase the Corps' database of pavement performance information; help validate pavement research results; serve as a check for design methodologies and construction/maintenance/rehabilitation specifications; and help refine pavement management and life-cycle prediction models.

For more information regarding testing and scheduling airfield pavement evaluations, contact Dr. David W. Pittman at (601) 634-3304 or e-mail at [pittmad@ex1.wes.army.mil](mailto:pittmad@ex1.wes.army.mil). General information on the US Army Engineer Waterways Experiment Station is available on the Web site at <http://www.wes.army.mil>. 📧

---

## New Joint Service Specification Available

CEGS 02749, "Hot-Mix Asphalt for Airfields" has been approved and is now activated on the TECHINFO homepage at <http://www.hnd.usace.army.mil/techinfo>. The Airfield Asphalt User Group which includes Army, Air Force, Navy, Federal Aviation Administration (FAA), National Center for Asphalt Technology (NCAT), Asphalt Institute and National Asphalt Paving Association (NAPA) developed this new guide specification. This is the first joint tri-service/FAA specification. This specification supercedes CGS 02743, "Asphalt for Heavy-Duty Pavements". CGS 02749 is to be used for airfields and other heavy duty pavements. ❧

---

## Superpave Construction Guidelines

*Superpave Construction Guidelines*, published by the National Asphalt Pavement Association (NAPA), provides information on how to deal with mix production and construction issues that may arise with coarse-graded Superpave designed mixtures. The 17-page publication covers: materials (aggregates and asphalt binder); trucking; placement; compaction (test strips, lift thickness, rolling methods, tender zone); and quality control.

*Superpave Construction Guidelines* (NAPA Special Report 180) can be purchased from NAPA at \$12 per copy; \$8 for government agencies; and \$7 per copy for orders of more than 100 copies. Phone to order at: toll free (888) 468-6499; telephone (301) 731-4748; fax (301) 731-4621; <http://www.hotmix.org>.

Source: *Superpave Implementation Update*, Summer 1998. ❧

---

## Air Force Publications Available on the Internet

The Air Force has civil engineering publications available on the Internet at <http://afpubs.hq.af.mil/elec-products/pubpages/32-pubs.stm>. You can view the document on-line using Adobe Acrobat Reader. Acrobat Reader is available on this site if you don't already have it loaded on your computer. If you are want to download a publication to your hard drive try the following: Using the mouse, find the publication number in the list. Put the cursor on top the publication number you want (**do not left click on it**). RIGHT CLICK the publication number. Select "Save Target As..." from the pop-up menu. Select the desired drive/folder; click on Save. ❧

---

## NCAT Publications

The National Center for Asphalt Technology (NCAT) has free asphalt publications available on the Internet at <http://www.eng.auburn.edu/center/ncat/public.htm>. You may also order bound hard copies of any of the reports. Prices and ordering instructions are available at the NCAT web site. ❧

---

## www.internet.addresses

### Transportation Systems 2000 Workshop

<http://www.transportation2000.com>

Site provides information about the workshop and call for papers. You can also register for the e-mail group to receive electronic messages for upcoming dates.

### Asphalt Pages®

<http://www.asphaltpages.com>

The Yellow Pages for the Asphalt Industry. Site has over 1500 entries classified in 87 categories.

### Superpave Models and Software

<http://www.ence.umd.edu/superpave>

Site provides models, developed as part of the Strategic Highway Research Program (SHRP), to predict rutting, fatigue cracking, and thermal cracking of asphalt under cumulative traffic load and environmental exposure. Site also provides Superpave volumetric mix design software.

### Department of Transportation

<http://www.state.tn.us/transport/links.htm>

Site provides a link to the U.S. Department of Transportation and links to all other state DOTs.

### PC On-Line Help

<http://www.pchelponline.com>

Site provides help in locating a specific company or information to cure your PC woes. There is a discussion forum for getting answers to a specific problem or asking for opinions. ❧

---

## Air Mobility Command Adopts Review Policy

In a memo dated 29 July 1998, Headquarters Air Mobility Command (AMC) requests all HQ AMC major airfield pavement projects be reviewed by the Transportation Systems Center (TSMCX). AMC feels "the use of TSMCX to review major projects (over \$1M) would improve the construction quality, reduce cost of construction by limiting contract modifications, and decrease the cost of future maintenance". The memo lists the scope of TSMCX reviews and the average review fees (see page 3). For more information contact [Ken Hevner](#), HQ AMC, (618) 256-3067. ❧

---

## Training Courses

### Railroad Tracks

#### Evolution of Tracks – Design Analysis, Track Buckling and Maintenance

25-29 January 1999 - Wilmington, Delaware

This course is to provide the participants with an understanding of the evolution of track technology, with the knowledge to assess the track response when subjected to thermal and train loads (including track buckling), and with simple methods to analyze the various track components. This knowledge is needed for the design and maintenance of freight and transit tracks. For more information contact the Institute for Railroad Engineering, (302) 571-0384, FAX (302) 654-8614, <http://www.raileng.com>.

### Superpave Volumetric Mix Design Workshop

Auburn University

Superpave volumetric mix design workshops will be held at National Center for Asphalt Technology (NCAT) regularly. These 2 ½ day workshops include training on Superpave mix design procedures. For more information contact NCAT at (334) 844-6228, <http://www.eng.auburn.edu/center/ncat>.

### A Short Course in Asphalt Technology

February 1999 - Auburn University

The purpose of the 2-week course is to provide a general understanding of all phases of hot mix asphalt (HMA) technology. For more information contact NCAT at (334) 844-6228, <http://www.eng.auburn.edu/center/ncat>.

---

## Conference to Showcase Testing Facility

At the ASCE Airport Technology Conference, 11-14 April 1999 in Atlantic City, New Jersey, there will be discussions on airport pavement, airport safety and full-scale airport pavement testing. The conference will showcase the new FAA National Airport Pavement Testing Facility, which is now under construction. Construction management of the facility is by the Philadelphia District Corps of Engineers. The facility will feature a machine capable of testing pavement loads of up to 75,000 pounds per aircraft wheel in simulated 18-wheel configurations, as well as a variety of other tasks.

---

## Team Effort for New Rail Line at Ft. Campbell

The Transportation Systems Center (TSMCX) served on Louisville District's team to design a new \$15M Railroad Connector Project at Ft Campbell, Kentucky. The project will permit abandonment of an existing line that runs through the City of Hopkinsville, Kentucky. Final design documents reflect the dedicated partnering effort between the City of Hopkinsville, the County, CSX Railroad, Ft. Campbell, and USACE. For more information contact Dan Boyer, (402) 221-7266, e-mail [dan.j.boyer@usace.army.mil](mailto:dan.j.boyer@usace.army.mil).

---

## Internet Address Corrections

The addresses below were printed incorrectly in Volume 15 of *Transportation News*. The on-line version of the newsletter had the correct addresses.

Construction Criteria Base – <http://www.nibs.org/ccb/ccb1.htm>

American Concrete Institute Seminars– <http://www.aci-int.org/events/evsem.htm>

---

## Calendar of Events

### TRB Annual Meeting

Washington DC

10-14 January 1999

<http://www.nas.edu/trb>

### World of Concrete

Las Vegas, Nevada

18-22 January 1999

(800) 837-0870, FAX (630) 543-3112,

<http://www.wocexpos.com>

### Asphalt Conference and Expo

St. Petersburg, Florida

24-27 January 1999

POC: Wendy Cantwell (800) 254-2123 or

Chris Harrison (800) 355-1860, ext 23

### CONEXPO-CON/AGG '99

Las Vegas, Nevada

23-27 March 1999

(301) 587-1400, FAX (301) 587-4260,

<http://www.conexpoconagg.com>

### American Concrete Institute (ACI)

Chicago, Illinois

14-18 March 1999

848-3795, FAX (810) 848-3796

### ASCE – Airport Technology Conference

Atlantic City, New Jersey

11-14 April 1999

POC: William Leder (415) 908-6450, FAX

(415) 908-6451

### Geosynthetics '99

Boston, Massachusetts

28-30 April 1999

(800) 636-5042, (651) 225-6942, FAX (218)

365-2077, <http://www.ifai.com>

### 5<sup>th</sup> Int'l Symposium on High-Strength/ High-Performance Concrete

Oslo, Norway

20-24 June 1999

Norwegian Concrete Association,

PO Box 2312, Solli, N-0201, Oslo, Norway

### ASCE – Annual Convention

Charlotte, NC

17-20 October 1999

<http://www.asce.org>





## Update Your Mailing Address

- o Add me to your mailing list.
- o I'll read the newsletter on-line, but use my e-mail address to notify me when a new issue is out. Please delete me from your mailing list.
- o Delete me from your mailing list.
- o Address correction.

Name \_\_\_\_\_

Organization/Office Symbol \_\_\_\_\_

Address \_\_\_\_\_

City/State/Zip \_\_\_\_\_

E-Mail \_\_\_\_\_

Phone Number \_\_\_\_\_

Fax this page to Mary Adolf, Transportation Systems Center, FAX (402) 221-7261 or e-mail a message to [mary.j.adolf@usace.army.mil](mailto:mary.j.adolf@usace.army.mil)



## Transportation News

U.S. ARMY CORPS OF ENGINEERS  
TRANSPORTATION SYSTEMS CENTER  
215 NORTH 17TH STREET  
OMAHA, NEBRASKA 68102-4978

-----  
OFFICIAL BUSINESS

### TRANSPORTATION SYSTEMS CENTER

If you have any questions on transportation systems, let us hear from you.

U.S. Army Corps of  
Engineers  
Transportation  
Systems Center  
215 North 17<sup>th</sup> Street  
Omaha, NE 68102-  
4978

#### Homepage

[http://w3.nwd-mr.  
usace.army.mil/tsmcx/  
tsmcx.html](http://w3.nwd-mr.usace.army.mil/tsmcx/tsmcx.html)

#### Terry Sherman

Director  
(402) 221-7260

#### Bettyjo Wagner

(402) 221-7264

#### Mary Adolf

(402) 221-7265

#### Dan Boyer

(402) 221-7266

#### John Gregory

(402) 221-7267

#### Os Keifer

(503) 808-3835

#### Kordon Kiel

(402) 221-7268

#### Gainard Mattke

(402) 221-7263

#### B.J. Skar

(402) 221-7262

#### FAX

(402) 221-7261